राज्याचे वराह पैदास धोरण.

महाराष्ट्र शासन
कृषि, पशुसंवर्धन,दुग्धव्यवसाय विकास व मत्स्यव्यवसाय विभाग
शासन निर्णय क्रमांक- पविआ- १०२१/प्र.क्र.३०१/पदुम-३,
मंत्रालय, विस्तार, मुंबई-४०० ०३२,
दिनांक : ०२ फेब्रुवारी, २०२२.

वाचा :- १. केंद्र शासनाचे पत्र क्र.१८-१८/२०१५, दिनांक २२.११.२०१७
२. आयुक्त पशुसंवर्धन यांचे पत्र जा. क्र पशुधन-४/प्र.क्र.१५ /२०२१ पसं-१३ ,पुणे-६७ दिनांक २९.१०.२०२१.

प्रस्तावना :

राज्यात वराहांच्या कोणत्याही मूळ आणि ज्ञात जाती नसल्यामुळे, लँडरेस, विदेशी मूळच्या मध्यम आणि मोठ्या यॉर्कशायर जाती देशात आणल्या गेल्या आहेत आणि काही प्रमाणात स्थानिक वराहांचे क्रॉस ब्रीडिंग/अपग्रेडिंग अनियंत्रित / अनियोजित पद्धतीने हाती घेण्यात येत आहे. राज्यात वराह पालनाच्या व्यवसायाला चालना देण्यासाठी, तसेच वराहांची पैदास सुनियोजित व नियंत्रित करण्याच्या दृष्टीने वराह पैदास धोरण निश्चित करण्याची बाब शासनाच्या विचाराधीन होती.

शासन निर्णय :-

२. राज्यात वराह पालनाच्या व्यवसायाला चालना देण्यासाठी, तसेच वराहांची पैदास सुनियोजित व नियंत्रित करण्याच्या दृष्टीने सोबत जोडलेल्या परिशिष्टा नुसार वराह पैदास धोरणास शासनाची मान्यता प्रदान करण्यात येत आहे. या धोरणात नमूद वैज्ञानिक व तांत्रिक बाबीं संदर्भात विसंगती टाळण्या करिता सदर धोरण इंग्रजी भाषेमधून करण्यात आले आहे.

३. सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आलेला असून, त्याचा संकेतांक क्र. २०२२०२०२१७१४२३६८०१ असा आहे. हा आदेश डिजीटल स्वाक्षरीने साक्षांकित करुन काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

सहपत्र:- परिशिष्ट

VIKAS TULSHIRAM KADAM

Digitally signed by VIKAS TULSHIRAM KADAM
DN: c=IN, o=GOVERNMENT OF MAHARASHTRA, ou=AGRICULTURE AND ADF DEPARTMENT, postalCode=400032, st=Maharashtra, 2.5.4.20=9869ec61c857e78e82b7a19b04c6d22f8ef1b8dbc9b19d45ef776d80ef148059, pseudonym=DC507174367F67372038B4A3876B5734B8B7FD46, serialNumber=406CB152E109154A7466C0050F88E5A437E17838973824687653A5E8D144B72B, cn=VIKAS TULSHIRAM KADAM
Date: 2022.02.02 17:15:44 +05'30'

(विकास तु. कदम)
अवर सचिव, महाराष्ट्र शासन

प्रति,

१. मा. राज्यपाल यांचे सचिव, राजभवन, मलबारहिल, मुंबई.
२. मा. मुख्यमंत्र्यांचे प्रधान सचिव.
३. मा. उप मुख्यमंत्र्यांचे प्रधान सचिव.
४. आयुक्त पशुसंवर्धन, महाराष्ट्र राज्य, पुणे
५. सर्व मा. मंत्री व राज्यमंत्री यांचे खाजगी सचिव, मंत्रालय, मुंबई.
६. महालेखापाल, महाराष्ट्र -१/२ (लेखा व अनुज्ञेयता), महाराष्ट्र, मुंबई / नागपूर.

७. महालेखापाल, महाराष्ट्र -१/२ (लेखा परिक्षा), महाराष्ट्र, मुंबई / नागपूर.

८. सर्व प्रादोशिक सहआयुक्त पशुसंवर्धन.

९. सर्व जिल्हा उपआयुक्त पशुसंवर्धन.

१०.सर्व जिल्हा पशुसंवर्धन अधिकारी.

११.निवड नस्ती-पदुम-३.

MAHARASHTRA STATE PIG BREEDING POLICY

Preface :

The State Pig breeding policy necessarily focuses on increasing the population of pigs and also on increasing the weight gain in pigs as well as augmenting the litter size per furrowing. This policy also encompasses employment as well as entrepreneurship development through the occupation of Piggery / Pig Breeding.

In view of this, the local / non descript population of pigs needs to be genetically upgraded with **high yielding, disease resistant** exotic breeds such as Yorkshire, Landrace, Hampshire, Duroc etc. and also with renowned indigenous pig breed viz Agonda Goan of Goa. This is aimed at increasing the capacity of gain in weight, increase in litter size and thereby increasing the population of pigs for meat/pork production. It is also necessary to expand the genetic up-gradation programme in pigs through artificial insemination for which the required inputs will be provided for the benefit of piggery farmers and pig breeders.

The pigs which were being reared in Free Range system in metropolitan cities earlier, are now getting restricted on account of clean and hygienic city norms. Therefore, it is now the need of hour to rear pigs in confined / semi confined manner and feed them with low cost food such as combination of grains with kitchen waste, market waste, hotel waste etc.

It is also necessary to explore market for sale of pigs / pork in consideration of the fact that pork is mainly consumed by specific community and is disliked by most of the communities on account of religious and cultural reasons. In view of the need to augment availability of animal proteins in human diet in form of meat/ pork, so also in consideration of constant increasing prices of Poultry / Goat Meat there is a need to promote availability and consumption of pork in State. Hence, this policy intends to address these issues.

In nutshell, the State Pig Breeding Policy aims to focus on improving growth, prolificacy, quality and quantity of meat produced, survivability and utilization of low cost locally available feed and managemental conditions besides promoting Self-employment and Entrepreneurship development for the youth.

Present Scenario :

At present, the activity of pig rearing is being undertaken largely under the unorganized sector wherein the pigs are reared in numbers varying from 2 to 35-40 on an average. This rearing is of Free Range type and hence it is very cost effective. These pigs are hardly fed with grains or household food wastes and they thrive mainly on varied type of items, which they come across during scavenging. These Pigs are mostly let loose and are even not provided with any shelter at night, in rains / storms etc. However, their survivability is good and average litter size per furrowing is 6 to 8. Due to absence of feeding nutritious feed and

non-undertaking the required de-worming, the weight gain in these pigs is not encouraging . The owners, with acquired wisdom, smartly select the male piglets and sell them for meat/pork production when the need money. There are no special markets for sale of pigs and the traditional business involves on demand sale.

Pig population in Maharashtra State has been found to remain moreover static over a period of 20 years from the census year 1992 till the year 2012. A slight declining trend has also been noticed in the pig population. The statistical data is as given below.

Pig population As per Last 5 Census

Year	Pig population in Maharashtra
1992	375310
1997	567000
2003	428840
2007	326740
2012	325756
Decline in Pig Population as per last 4 census	

Pig population in Maharashtra (2012 Census)

	EXOTIC			INDIGENOUS			
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	GRAND TOTAL
RURAL	9730	12848	22578	84605	125500	210105	232683
URBAN	6765	8112	14877	32483	45713	78196	93073
TOTAL	16495	20960	37455	117088	171213	288301	325756
Pig Population – more in rural area							

Pig – Breed-wise Population of Maharashtra

Breed	Male	Female	Total
Indigenous	1,17,088	171213	288301
Exotic	16495	20960	37455
Total	133583	192173	325756
Exotic Breeds			
Landrace	1092	1261	2353
Yorkshire	4807	6360	11167
Crossbred	10596	13339	23935

Maharashtra Total pig Population District-wise

Sr. No.	District	Landrace Exotic	Yorkshire Exotic	Pigs-Crossbred	Pigs-Non-descript	Total
1	Mumbai	0	0	350	307	657
2	Thane	1046	178	857	5749	7830
3	Raigad	623	0	435	414	1472
4	Ratnagiri	0	288	0	2	290
5	Sindhudurg	0	654	27	1017	1698
	Total Mumbai	**1669**	**1120**	**1669**	**7489**	**11947**
6	Nashik	668	926	727	27120	29441
7	Dhule	0	0	290	30198	30488
8	Nandurbar	0	0	1117	9543	10660
9	Jalgaon	0	0	1637	17780	19417
10	Ahmednagar	0	0	1230	12730	13960
	Total Nashik	**668**	**926**	**5001**	**97371**	**103966**
11	Pune	0	484	2133	6888	9505
12	Satara	0	1121	115	3215	4451
13	Sangli	0	205	0	3551	3756
14	Solapur	0	0	1589	13319	14908
15	Kolhapur	16	301	10	4266	4593
	Total Pune	**16**	**2111**	**3847**	**31239**	**37213**
16	Aurangabad	0	245	3765	13241	17251
17	Jalna	0	377	869	17497	18743
18	Parbhani	0	1895	0	5493	7388
19	Beed	0	0	1038	10330	11368
	Total Aurangabad	**0**	**2517**	**5672**	**46561**	**54750**
20	Latur	0	97	1536	6953	8586
21	Osmanabad	0	0	2052	2898	4950
22	Nanded	0	851	639	11514	13004
23	Hingoli	0	839	10	2222	3071
	Total Latur	**0**	**1787**	**4237**	**23587**	**29611**
2 4	Amravati	0	661	12	5008	5681
25	Akola	0	328	43	5789	6160
26	Washim	0	1521	0	8277	9798

27	Buldhana	0	113	1634	8456	10203
28	Yavatmal	0	6	331	3389	3726
	Total Amravati	**0**	**2629**	**2020**	**30919**	**35568**
29	Nagpur	0	0	980	5913	6893
30	Wardha	0	0	207	2603	2810
31	Bhandara	0	0	84	165	249
32	Gondiya	0	0	119	1189	1308
33	Chandrapur	0	43	28	2611	2682
34	Gadchiroli	0	34	71	38654	38759
	Total Nagpur	**0**	**77**	**1489**	**51135**	**52701**
	State Total :	**2353**	**11167**	**23935**	**288301**	**325756**

Over the years, the potential / inherent great capacity of pigs to convert any item consumed by them as food into meat / pork, and that to at very low cost; has duly attracted establishment of commercial piggery farms in the State inhabiting pigs in numbers ranging from 100 to 250. Such commercial farms at present are limited in number and have been established in the periphery of metro cities. Thus commercial piggery farms are mostly observed in the periphery of Pune, Mumbai (Vasai, Virar ,Thane, Dahanu, Kankavali District Sindhudurg, Satara, Kolhapur, Goa adjacent area of Kolhapur District and Gadchiroli.

The pigs in such commercial farms are mostly of exotic breeds and are usually fed on hotel wastes / market wastes. This material, which is otherwise a menace, is collected at source without any cost and is subsequently transported by the pig owners at their own cost.

A trend of contract piggery farming is also getting developed in the Sate. Some prominent pig breeders are integrating this business by supplying female piglets to the new interested piggery farmers with an agreement for buyback of male piglets having stipulated weight gained at specified age and in a pre determined time frame. This trend also needs to be promoted and expanded with a forward linkage of a well constructed, fully automatic slaughter house for production of hygienic pork and other products.

1. Objectives:

1. To promote establishment of nucleus herd of exotic and improved indigenous breeder parent piggery farms in private sector, which would serve as source of improved genetic material inform of breeding sows, female piglets, semen of the

exotic and improved variety boars for use in implementation of genetic up gradation programme in local non descript pigs in the State.

2. Genetic improvement of local/non-descript Pigs by crossbreeding them using the semen of boars of exotic breeds viz Yorkshire, Landrace, Hampshire, Duroc etc. and gradually replacing the non-descript pigs with crossbred germplasm of 50 percent level of exotic inheritance.

3. Expansion and strengthening of breeding infrastructure and support mechanism to propagate elite germplasm through use of Artificial Insemination (AI) technique.

4. Up gradation of the non descript pigs with the use of semen of Agonda Goan boars (available in Goa). To start with, this activity should be taken up on pilot basis in the districts of Kolhapur, Ratnagiri and Sindhudurg (adjoining Goa State). Based on the result of the performance of the improved progeny, this activity may be further expanded.

5. To provide incentives to the piggery farmers and pig breeders who are already in the business and also who are desirous to establish piggery farms. These incentives may include the following.

- Easy bank credit facility, Subsidized interest rates at par with Agriculture
- One time subsidy for small holders purchasing breeding boars
- Annual subsidies for using AI services
- One time subsidy for AI service providers
- One time subsidy for waste management system
- Subsidies for the import of Grand Parents and Parents Stocks
- Tax subsidies for pork and pork product producers ()
- Subsidies for infrastructure development i.e. for improvised housing, feeding and watering systems, establishment of bacon factories, manufacture of pork products and value addition in them.
- Non-levy of income tax on the income from piggery farming business
- Concessional electricity tariff for piggery farming at par with Agriculture activities.
- Rationalization of the rates for charging Property Tax of piggery farms where pigs are being reared/ housed.

6. To ensure easy availability of swine fever vaccine in the State for economic stability of piggery farming business and for prevention of losses due to heavy mortality and morbidity from this disease.

7. To promote piggery development, knowledge of scientific rearing practices including housing, feeding, breeding, disease control, marketing and management

would be provided / disseminated on larger scale through Veterinary collages, Krishi Vidhnyan Kendras (KVK) reputed training institutes and State Animal Husbandry Department (Through field level staff). This training may include the following.

- Training of farm managers/large scale entrepreneurs on breeding management
- Regular/refresher training for technical personnel, para-vets and livestock service provider
- Training of farmers/service provider on semen collection and AI in pigs

8. To create conducive environment for development of a three tier piggery business model involving Nucleus sire and dam line farms at apex level, Multiplication farm for crossbred females at middle level and Commercial piglet production and finishing at primary / grass root level. This will ensure a stable and feasible chain model.



2. Methodology for Implementation of proposed Pig Breeding Policy :

2.1. It is necessary to define as to how the proposed policy would actually be implemented in the State. The unorganized sector is large, nonresponsive and scattered throughout the State. It would therefore be necessary to impose total restrictions on rearing pigs in Free Range system in the cities, Towns and in Rural Areas (especially in the Jurisdiction of Gram Panchayats). In this Context, the local Administration would be encouraged to frame and implement policy for not permitting pigs rearing in Free Range System. Fine may be levied on the piggery farmers who would violate these restrictions. This will also help in promoting community piggery farming system in intensive / semi intensive pattern. State Government may extend support by allotting unused / barren government land / gairans for establishing community piggery farms mainly in the rural areas.

Implementation of the proposed breeding policy will be much easier if such community piggery farms are established. A track record of number of non descript indigenous pigs, cross bred pigs (if any), can easily be maintained, in case pigs are reared in community farming system. So also, provision of breeding service either through induction of exotic / crossbred / improved indigenous breed boars or through provision of liquid semen of exotic / crossbred / improved indigenous breed boars can conveniently be done in community pig farming system. Sale of male piglets for pork production, sale of female piglets for breeding purpose would fetch better price and could tap assured market especially in the North Eastern States and West Bengal by ensuring bulk supply as well as regular supply.

At the same time implementation of measures for control of highly infectious contagious diseases in Pigs viz Swine Fever, F.M.D., H.S. will be easier in case when pigs are reared in community farming system.

It is also proposed to ascertain the number of persons rearing pigs in Free Range system as well as in commercial piggery farms. It would be advisable to register all such persons / firms with the details of number of animals and their source, breed, breeding facilities available, disease status, details of sale of pigs etc.

Community pig farming will assist in developing a systematic process of identification, registration and recording of animals to be followed to keep track of the individual animals. It will also facilitate the system for pig disease surveillance and monitoring.

2.2 The commercial piggery farms would voluntarily extend full support for implementation of the proposed breeding policy. Some incentives as specified in the objectives of this policy if provided to these commercial farms; it will help in developing and multiplying large piggery farms say of capacity 300 to 500 pigs and establishment of forward linkage in form

of modern / automised abattoir (bacon factory). This will ultimately help in entrepreneurship development and enhanced income generation for the piggery farmers / entrepreneurs.

2.3 Availability of Germ-plasm :

For effective implementation of this breeding policy, adequate supply of Exotic and improved breed boars or adequate quantity of semen of exotic and improved breed boars, is the primary need. Keeping this in view, it is proposed to promote exotic / cross bred pig breeding farms in private sector, which would serve as the Nucleus herd. The pigs of Yorkshire, Landrace, Hampshire, Duroc etc. breeds would be reared in these Nucleus herds. The male piglets born to the breeder sows would be procured / purchased by the commercial pig breeding farms and will be utilized either for crossbreeding or pure breeding and even can be used for production of semen and its subsequent distribution / sale in the field as per demand.

The germ-plasm of Agonda Goan breed, can be availed from the adjoining Goa State. It is proposed to establish Pig Breeding Farms in Sindhudurg and Kolhapur districts, which would inhabit Agonda Goan Breed pigs. Such private piggery farms will serve as nucleus herd for Agonda Goan breed. The male piglets or the semen of boars can then be made available to small / medium size pig farms, small piggery farmers for upgradation of their local non- descript pigs.

2.4 Registration of pig farmers and Pig farming – Breeding Firms

For ensuring effective traceability and disease control, all piggery farms and pig farming – breeding firms or the persons who are involved in pig farming as entrepreneurs, aspirant piggery farmers, traditional communities, unemployed youth and interested entrepreneurs benefitted with pig units should therefore register themselves with Department of Animal Husbandry Government of Maharashtra. It is proposed to make this mandatory. This will also help in knowing the profile and trends in pig farming with the volume of trade, business economics.

3. Proposed Breeding plan :

3.1 Nucleus Farm :

1. Nucleus farm may be of pure exotic breed, well-developed crossbred or pure indigenous breed pigs.
2. Crossbred animals of desired level of exotic inheritance should be maintained. Crossbreeding would be restricted to 50% level of exotic inheritance. However, the level of exotic inheritance may be increased in well organized breeding farms intended for production of improved/ crossbred boars to be used in breeding

programme. In case of nucleus herd of pure animals, mixing/crossing of germplasm will be avoided .

3. Minimum 30 breedable sows unit should be maintained with a sex ratio of 1:3 and thus 10 sires (2 sires from each 5 unrelated sire lines) will be maintained by each of the unit to avoid inbreeding.
4. For selection of male animals, the criteria viz. i) weaning weight (best 25%), ii) 8 month body weight (best 5%) will be preferred and prescribed based on this two stage sequential selection. For selection of female animals, i) dam's litter size at birth (>7) ii) weaning weight (best 25%) and iii) number of functional teats (at least 6 pairs of functional teats) will be prescribed.
5. Centralized data recording system will be prescribed. Generation-wise genetic evaluation would be carried out to estimate the response to selection. The overall genetic gain due to selection, selection differential and heritability will also be calculated.
6. Inbreeding will strictly be avoided. Replacement of boars will be done at regular interval of 2 years of productive herd life. Sire exchange programme among the farms will also be initiated to reduce the inbreeding effect. Culled male animals would be castrated before selling to avoid indiscriminate breeding.
7. Three number of farrowing per sow will be recorded. Three farrowing per sow should be completed in 2 years.
8. Weightage of selection will be given on litter size and weight at birth and weaning.
9. Besides routine productive, reproductive, adaptive and carcass traits lifetime production traits will also be recorded.

3.2 Multiplier and Farmers' Farm:

1. Multiplier farm will maintain grand parent (GP) and parent (P) stock of desired breed. The replacement (GP and P) stock of multiplier farm will be made available from nucleus farm. Multiplier farm will produce desired animals for propagation to farmers' field.
2. Breeding plan for farmers' field will be based on availability of genetic material, managemental skills and demand in the market. They are only to make *inter-se-mating* among the developed crossbred animals.

No indiscriminate crossbreeding is allowed at farmers' field.

3.3 Mating system:

All the breeding propagation activity will preferably follow Artificial Insemination (AI) practice. To achieve this, it is prescribed that the Nucleus farm and Multiplier farm must have a training center for the local farmers including required facility/laboratory for semen

collection, evaluation and preservation. However, natural mating will also be adopted till adequate quantity of preserved semen is available for Artificial Insemination (AI).

Selection of boars in breeding programme will be based on following points:

1. The breeding boars require a recorded pedigree, a quality certificate for the breed issued by the authority (that would duly be constituted by State Government) for boars used for AI/natural mating.
2. The boars used for semen production to be used for AI must be quarterly performance tested for semen quality.
3. The minimum area for keeping a breeding boar is 5 Sq.m for the local breed and 6 Sq.m for the exotic breed.
4. The maximum frequency of use of boars will be 2 times a week for AI boars younger than two years, 3 times a week for AI boars older than 2 years, and 3 times a week for natural mating boars.
5. The earliest age of use for AI or natural mating will be 8 months for local boars and 10 months for exotic boars.
6. AI boars will not be used for more than 3.5 years, and natural mating boars for not more than 3 years.
7. The reports on the quality of these boars will be annually sent to State Animal Husbandry Department for evaluation.
8. Boars will be vaccinated against swine fever, pasteurellosis, foot and mouth disease and other diseases as regulated.
9. A certification system will be implemented step by step for better quality breeding boars and sows for organized farms which can be recognized as certified breeding animals.

3.4 Culling :

Bad / unproductive animals will be eliminated from each generation at Nucleus and Multiplier farms. Animals along with its family with specific genetic disorders will be eliminated from the breeding programme.

This policy document takes an opportunity to elaborate the standard operating procedures in respect of management (Housing) , feeding, breeding, disease control, aspects of pig farming for maximizing benefits and increasing the profit. Accordingly these standard operating procedures are given in the attached Annexure A to F.

ÃSTANDARD OPERTATING PROCEDURES

ANNEXURE - A

HOUSING

- Housing should be simple and durable.
- The flooring should have a rough finish and made proof cement mortar or rough stone flooring. Proper drains and slope should be provided so that the effluents are disposed off.
- Generally, under village condition the housing can be made up of pens measuring 3 m X 2.4 m with an open yard of nearly the same dimension or in some cases slightly longer. Walls should be 1.2-1.5 m high from the floor.
- For the purpose of farrowing, some of the pens could be converted into farrowing pens by providing guard rails made up of G.I pipes of 5cm diameter, along the walls, 20-25 cm from the ground and the wall.
- In addition to guard rails, creep space can be provided for the piglets along the wall by making a partition or in one of the corner with separate entrances for the piglets. This space usually of 0.75 m X 2.4 m area.

ANNEXURE - A 1
BREEDS OF PIGS TO BE USED

- Exotic Breeds for pure Breeding
  - Yorkshire, Landrace, Hampshire, Duroc.
- Exotic Breeds for Cross Breeding
  - Yorkshire, Landrace, Hampshire, Duroc.
- Improved Indigenous Breed for upgradation of Non Descript Pigs
  - Agonda Goan

ANNEXURE - B

FEEDING PIGS

Following standard operating procedures are prescribed in view of achieving stipulated weight gain in the pigs during the determined time frame. However, the input costs involved in these SOPs tend to be on quite higher side and therefore are difficult to be practically implemented at Multiplier farms and farmers field.

- The successes of the pig farming are dependent upon the efficient scientific feeding practices.
- Generally, pigs are usually slaughtered at about 70kg body weight, which is generally achieved in six months of age. To meet the intensified pork production, properly balanced high quality ration must be provided to the pigs.
- Three types of rations are fed to the pigs before they reach the market weight i.e. creeper/ starter, grower and finisher rations. The creeper/ starter feed is generally fed up to the attainment of 15-20 kg body weight, which is followed by grower feed up to the attainment of 50 kg body weight, and then followed by finisher feed up to the attainment of 70 kg body weight.
- However, it is generally observed that, most farmers feed their pigs with freely available food materials like hotel/kitchen waste, bakery waste, garbage from vegetable market, broiler offal etc. it is suggested that these unconventional feeds should be fed as the partial replacement for the ingredients in standard ration to economize the pig production. It is prescribed that the kitchen/ hotel waste should preferably be boiled and then fed to the pigs to avoid menace of toxins originating from contaminants.
- **For references of the pig farmers, composition of three types of Standard pig ration have been provided.**

Ingredients	Creeper / Starter Feed	Grower Feed	Finisher Feed
Maize	50.0	45.0	40.0
Rice polish	22.5	35.0	47.5
Soybean meal	25.0	17.50	10.0
Mineral mixture	02.0	02.0	02.0
Common salt	0.50	0.50	0.50
crude Protein Percentage	18 %	16 %	14%

ANNEXURE - C

BREEDING PIGS :

- Gilts should weigh at least 80 to 100 kg before breeding.
- Ovulation rate increases during successive oestrous period (up to fifth) following puberty. Thus it is advantageous to delay the breeding of gilts until the second or third oestrous.
- Litter size increases on an average in succeeding pregnancies up to 5th or 6th litter. It is therefore advantageous to cull the sow from a breeding herd after her fifth or sixth litter size goes thereafter.

Age to breed gilts	7-8 months
Weight at breeding	100-120 kg
Length of heat period	2-3 days
Best time to breed in heat period	Gilts – first day Sows – second day
Number of services per sow	2 services at an interval of 12-14 hours
Period of oestrous cycle	18-24 days (Average 21 days)
Occurrence of heat after weaning	2-10 days
Gestation period	114 days

- The average length of oestrous cycle in pigs 19-21 days.
- The oestrous symptoms last for three to five days beginning with vulvar swelling and vaginal discharge. In true oestrous there is frequent urination, reduced appetite, mounting and starting for service detected by the erection of ears and immobility when normal pressure is applied to the back.
- Best time for breeding is during the latter half of the day or early on the second day of oestrous. In many cases the gilts and sows continue to exhibit the standing heat on the next day.
- In these cases the animals should be rebred and the interval in the case of rebreeding should be 12-14 hours. This procedure will ensure a high conception rate in the herd.

- Sows may come into heat two to ten days after weaning and may be bred at this time. But better results can be obtained by breeding them in the second post lactational oestrous.
- The animals which have been bred should be observed for the appearance of subsequent oestrous. If sows not conceived even after successful mating with a boar in two continuous oestrous cycles it is desirable to cull them from the herd.
- It is important not to overfeed sows which have been bred. Over fat sows are apt to produce weak pigs and crush more piglets at farrowing. Sows should gain about 35 kg and gilts about 55 kg from breeding to farrowing.

ANNEXURE - D

RAISING ORPHAN PIGLETS

- The death of a sow after farrowing, poor lactation capacity of the sow results in orphan piglets. The orphan piglets may be transferred to another sow that has farrowed recently.
- To ensure acceptance of orphan piglets the sow should be separated from her own litter for short time and the orphanage piglets and her own piglets are to be applied with some strong odour giving substance like tincture iodine/ benzoin and brought back altogether to the mother.
- Orphan piglets can also be raised with milk replacer prepared by mixing one egg yolk to one litre of cow milk.

Weaning :

- Separation of piglets from her mother is to be carried out 6 to 8 weeks of age.
- The sow should be separated from the piglets for a few hours each day to prevent stress of weaning and feed is reduced gradually.
- The piglets should be dewormed after 2 weeks of weaning. The piglets should be gradually shifted from 18% protein creep feed to 16% grower ration over a period of two weeks.
- Group of 20 piglets of more or less the same age should be housed in each pen.

ANNEXURE - E

HEALTH MANAGEMENT

- Like other livestock pigs also get sicknesses due to bacterial infections, viral infection and parasitic infestation. Many times stresses due to climate change or sudden change of feed or faulty food material causes illness in pigs.
- Vaccination all the newly born piglets should be vaccinated at least against Swine fever at the age 2 months. Vaccine against Pasturellosis (Haemorrhagic septicaemia HS) and Foot and Mouth Disease vaccine like cattle is also preferred in pigs.
- Deworming In young pigs, infection with roundworms can cause diarrhea, weight loss, ling problems and death. Hence, the piglets should be dewormed regularly once three months.

PIGLET ANAEMIA

- Sow is unable to supply the needed iron through milk to the fast growing piglets maintained in concrete floored rooms are commonly suffering with anaemia.
- Piglet anaemia can be prevented by injection the piglets with iron dextron preparation or by smearing the pigs' mammary gland with ferrous sulphate solutions and adding adequate quantity of mineral mixture in the food of sows as well as piglets.

SKIN DISEASES

- Skin diseases Skin infection is commonly occurring ailment which may be caused by several organisms like bacteria, lice, ticks, mites and fungi these results in thickening and crusting of the skin. Mange occurs around the head, ears, legs and tail.
- The lice feed on the skin and irritate the pig, which will scratch and can cause wound, which become infected. Parasitic infestations can be treated by spraying of medicine or by dipping animal while treating animal pig house also should be sprayed with the same medicine.

ANNEXURE - F

HOW TO IMPROVE PROFIT IN PIGGERY BY PRODUCING BETTER QUALITY MEAT

- Profitability can be increased by producing better quality pig i.e. pig having faster growth and better conversion ability. This reduces production cost as less feed and time is required to grow such pigs. Pig having better disease resistance will perform better as less expense on medicine.
- By sale products it is economical to sale live pig but to get more returns if pork is sold there will be more profit. Profit can be increased to many folds if it is converted to products like sausages.